

WHAT IS CLAIMED IS:

1. An apparatus for mounting a cutting tool used in mining, road working or earth moving comprising: a bit holder, a protective wear sleeve for reducing wear
5 between the cutting tool and said bit holder, said protective wear sleeve having an outer surface that is adapted to being received in said bit holder, said wear sleeve including a rearward disc end portion, an annular groove portion and a forward tapered portion whereby
10 once said protective wear sleeve is set in said bit holder by axial blows with a hammer said protective wear sleeve will remain in said bit holder without relative rotational or axial movement between said protective wear sleeve and said bit holder.
- 15 2. The apparatus according to claim 1 wherein said forward tapered portion is tapered at an angle of between 5.5-7.0 degrees from a central axis of the wear sleeve.
- 20 3. The apparatus according to claim 2 further comprising: a retainer positioned around said annular groove of the wear sleeve.
- 25 4. The apparatus according to claim 1 further comprising: retainer for attachment to said wear sleeve around said annular groove.
5. The apparatus of claim 2 wherein said bit holder includes a cavity bore having a forward tapered portion and a rearward cylindrical portion for cooperatively receiving said wear sleeve.
- 30 6. The apparatus of claim 5 wherein said forward tapered portion of the bore is tapered at an angle of between 5.5-7.0 degrees from a central axis of the cavity bore.

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7. The apparatus of according to claim 1 wherein the wear sleeve has an external portion adjacent to the forward tapered portion that extends beyond said bit holder, said wear sleeve external portion has a shoulder and a rounded undercut portion between said
5 shoulder and said forward tapered portion of said wear sleeve, whereby when said wear sleeve is subjected to large loads and torques the rounded undercut portion weakens and fails first.

8. The apparatus according to claim 4 wherein said retainer is generally a cylindrical split sleeve retainer having beveled portions at both ends of said cylindrical retainer, whereby said beveled end portions compress when inserted into said bit holder,
15 said beveled ends help bias said cylindrical split sleeve outwardly away from said wear sleeve.

9. The apparatus according to claim 8 wherein said retainer beveled portions are initially angled at 25 degrees with respect to the central axis of
20 said cylindrical retainer.

10. An joint coupling comprising:
a female member,
a male member,
said male member having an outer surface
25 that is adapted to being received in said female member, said male member including a rearward disc end portion, an annular groove portion and a forward tapered portion whereby once said male member is set in said female member said male member will remain in said female
30 member without relative rotational or axial movement between said male member and said female member.

11. The joint coupling according to claim 10 further comprising: a retainer positioned around said annular groove of the male member.

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18. A cutting tool assembly comprising:
a bit holder,
a protective wear sleeve for reducing
wear between the cutting tool and said bit holder,
5 said protective wear sleeve having an
outer surface that is adapted to being received in said
bit holder, said wear sleeve including a rearward disc
end portion, an annular groove portion and a forward
tapered portion whereby once said protective wear sleeve
10 is set in said bit holder by axial blows with a hammer
said protective wear sleeve will remain in said bit
holder without relative rotational or axial movement
between said protective wear sleeve and said bit holder.